

DC VOLTAGE OUTPUT MODULE (2 points, isolated)

MODEL **R8-YVT2**

BEFORE USE

Thank you for choosing us. Before use, please check contents of the package you received as outlined below.

If you have any problems or questions with the product, please contact our sales office or representatives.

■ PACKAGE INCLUDES:

DC voltage output module.....(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES

- The equipment must be mounted inside a panel.
- The actual installation environments such as panel configurations, connected devices, connected wires, may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures* to ensure the CE conformity.

* For example, installation of noise filters and clamp filters for the power source, input and output connected to the unit, etc.

■ GENERAL PRECAUTIONS

- Before you remove or mount the unit, turn off the power supply and output signal for safety.
- Do not touch the connector while the power is supplied. Static electricity may cause a malfunction.
- Switches on the side of the module can be set for maintenance only while the power supply is off. Do not access them while the power is supplied.

■ ENVIRONMENT

- Indoor use.
- When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
- Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

■ WIRING

- Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

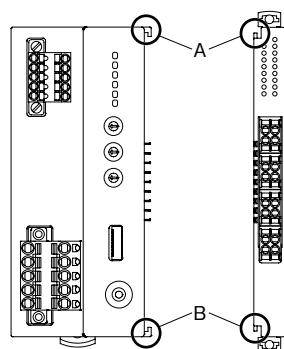
■ AND

- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

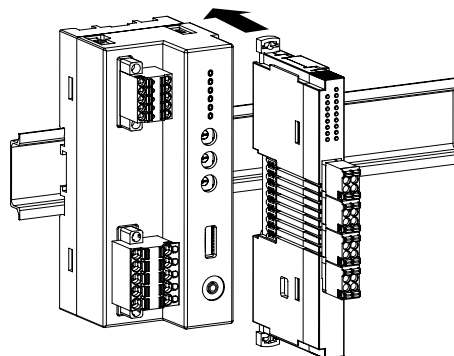
INSTALLATION

■ HOW TO MOUNT THE MODULE ON DIN RAIL

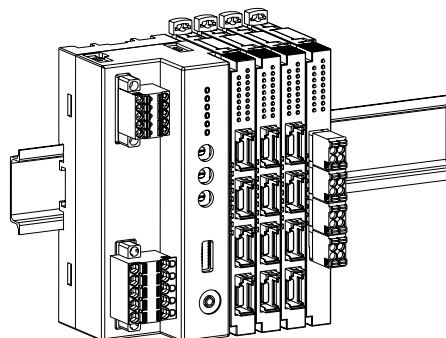
• I/O Module



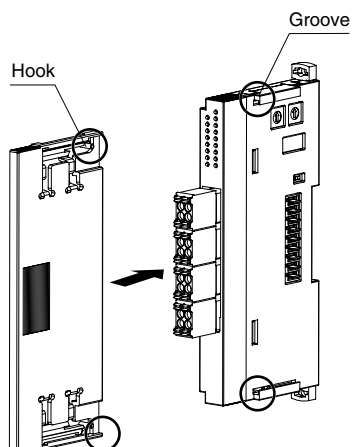
Confirm that the locking clamps of the I/O module are set. Insert the module in parallel to the next one while aligning the grooves of both modules (A & B in the above figure). Maintain it perpendicularly to the rail.



More I/O modules can be added in the same manner.

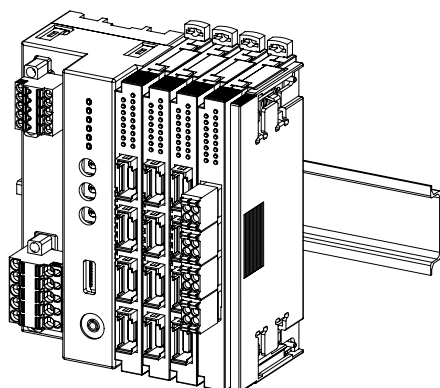


• Protective Cover

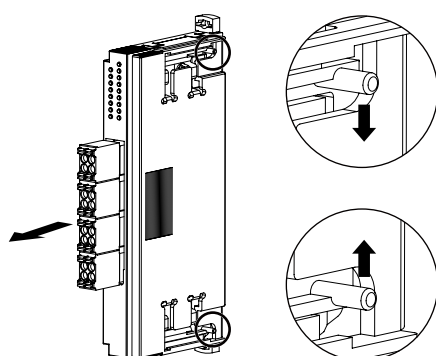


The protective cover is to be attached over the connected I/O module at the right end.

Align the hooks on the cover with the grooves of the module and slide it straight until the hooks are latched.

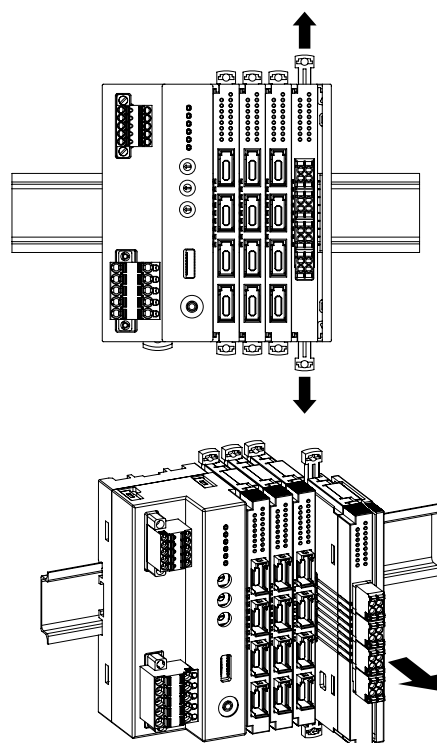


When removing the cover, pull it out while squeezing the hooks inward.

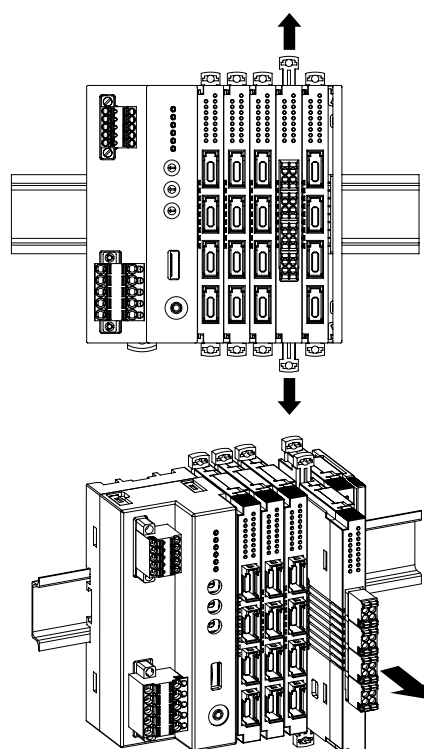


■ HOW TO UNMOUNT THE MODULE ON DIN RAIL

Release the locking clamps and pull out straight the module.



• Removing an intermediate module



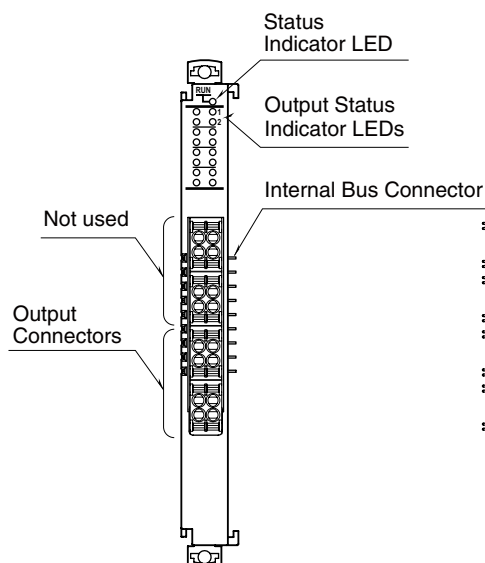
Caution !

- 1) Be careful not to hurt your hand by pointed edges of the internal bus connector.
- 2) I/O modules cannot hold tightly on the DIN rail by themselves without power/network module.

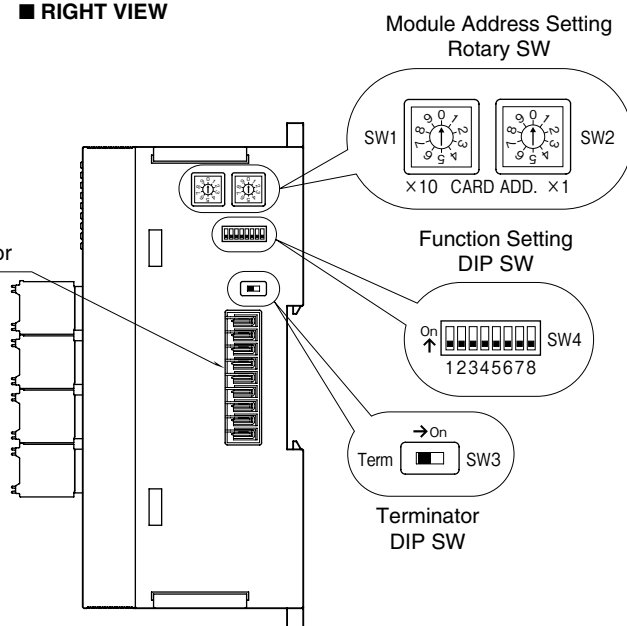
Secure them to the position if necessary by using DIN rail end plates.

COMPONENT IDENTIFICATION

■ FRONT VIEW



■ RIGHT VIEW



■ INDICATOR LED

| ID | OPERATION | FUNCTION |
|---------------|----------------|-------------------------------|
| Status | OFF | Stopping |
| | Green ON | Valid host communication |
| | Green Blinking | Reading/writing configuration |
| | Red ON | Setting error |
| | Red Blinking | Parameter error |
| Output Status | OFF | Output data in the range |
| | Red Blinking | Output data out of range |

■ OUTPUT CONNECTOR ASSIGNMENT

| PIN NO. | ID | FUNCTION |
|---------|-----|--------------|
| 1 | NC | Unused |
| 2 | NC | Unused |
| 3 | NC | Unused |
| 4 | NC | Unused |
| 5 | NC | Unused |
| 6 | NC | Unused |
| 7 | NC | Unused |
| 8 | NC | Unused |
| 9 | Ao1 | Output 1 (+) |
| 10 | AG1 | Output 1 (-) |
| 11 | NC | Unused |
| 12 | NC | Unused |
| 13 | Ao2 | Output 2 (+) |
| 14 | AG2 | Output 2 (-) |
| 15 | NC | Unused |
| 16 | NC | Unused |

| | | | |
|---|----|---|----|
| 1 | NC | 2 | NC |
| 3 | NC | 4 | NC |

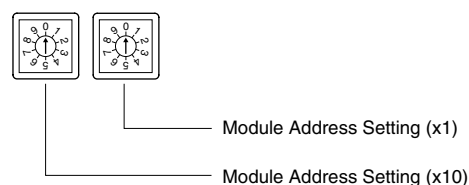
| | | | |
|---|----|---|----|
| 5 | NC | 6 | NC |
| 7 | NC | 8 | NC |

| | | | |
|----|-----|----|-----|
| 9 | Ao1 | 10 | AG1 |
| 11 | NC | 12 | NC |

| | | | |
|----|-----|----|-----|
| 13 | Ao2 | 14 | AG2 |
| 15 | NC | 16 | NC |

■ MODULE ADDRESS: SW1, 2

The left switch determines the tenth place digit, while the right one does the ones place digit of the module address. Address is selected between 0 to 31.
(Factory setting: 0)



■ OPERATING MODE

(*) Factory setting

• Range: SW4-1, 4-2

Same setting for all channels. Use PC Configurator to set independent ranges per channel.

| OUTPUT RANGE | SW4-1 | SW4-2 |
|-------------------|-------|-------|
| -10 – +10V DC (*) | OFF | OFF |
| 0 – 10V DC | ON | OFF |
| 0 – 5V DC | OFF | ON |
| 1 – 5V DC | ON | ON |

• Output at the Loss of Communication: SW4-7

Same output for all channels.

| OUTPUT AT THE LOSS OF COMMUNICATION | SW4-7 |
|-----------------------------------------------------------|-------|
| Output Hold (*) (last data correctly received is hold) | OFF |
| Stop output | ON |

* For Stop output, output fixed at -5% when configuration mode is DIP switch setting.
Output fixed at scaling value at the loss of communication when configuration mode is PC.

• **Configuration Mode: SW4-8**

| | |
|-----------------------------------|-------|
| CONFIGURATION MODE | SW4-8 |
| DIP switch setting (*) | OFF |
| PC Configurator and communication | ON |

■ **TERMINATOR DIP SW: SW3**

| | |
|---------------|-----|
| TERMINATOR SW | SW3 |
| Without (*) | OFF |
| With | ON |

* Be sure to set unused SW4-3 through 4-6 to OFF.

PC CONFIGURATOR

The following parameter items can be configured with PC Configurator Software (model: R8CFG).
Refer to the users manual of the software for detailed operations.

■ **CHANNEL INDIVIDUAL SETTING**

| PARAMETER | SETTING RANGE | DEFAULT SETTING |
|----------------------------------------------------------|-----------------------|-----------------|
| Output range | -10 - 10 V DC | -10 - +10 V DC |
| Lower range value | -10.00 - +10.00 (V) | -10.00 (V) |
| Upper range value | -10.00 - +10.00 (V) | 10.00 (V) |
| Fine zero adjustment | -320.00 - +320.00 (%) | 0.00 (%) |
| Fine gain adjustment | -3.2000 - +3.2000 | 1.0000 |
| Scaled range Zero | -32000 - +32000 | 0 |
| Scaled range Span | -32000 - +32000 | 10000 |
| Initial output at the startup (scaled range) | -32000 - +32000 | 0 |
| Fixed output at the loss of communication (scaled range) | -32000 - +32000 | -500 |

■ **CHANNEL BATCH SETTING**

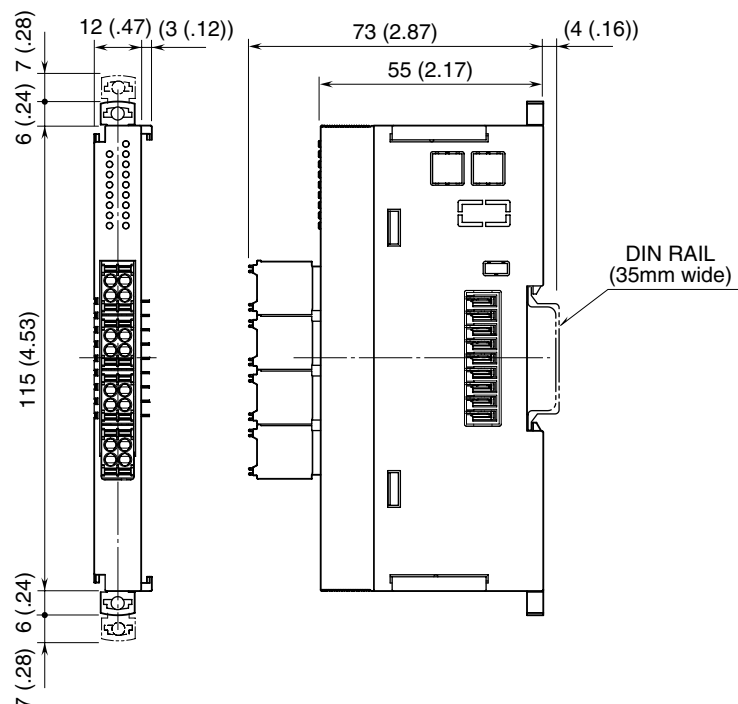
| PARAMETER | SETTING RANGE | DEFAULT SETTING |
|---------------------------------------------------|-------------------------------------------------------------------|--------------------------------------|
| Loss of internal bus communication detection time | 0.0 – 99.9 (sec.) | 1.0 (sec.) |
| Output function at the loss of communication | Hold the last normally received data Fixed output as specified | Hold the last normally received data |
| Configuration mode | DIP SW (OFF) PC (ON) | DIP SW (OFF) |

Note: Be sure to set SW4-8 to ON to configure output range and output at the loss of communication by the PC configurator.
Settings are programmed by the PC Configurator via the Power/Network Module.

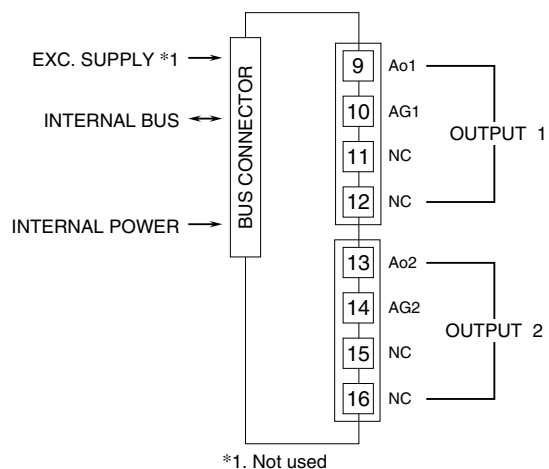
TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

EXTERNAL DIMENSIONS unit: mm [inch]



CONNECTION DIAGRAM



WIRING INSTRUCTIONS

■ SEPARABLE TENSION CLAMP TERMINAL

Unit side connector: Tension clamp terminal product

Cable side connector: DFMC1,5/2-ST-3,5

(Phoenix Contact)

(included in the package)

Applicable wire size: 0.2 - 1.5 mm²

Stripped length: 10 mm

Recommended solderless terminal:

- AI0,25-10YE 0.25 mm² (Phoenix Contact)
- AI0,34-10TQ 0.34 mm² (Phoenix Contact)
- AI0,5-10WH 0.5 mm² (Phoenix Contact)
- AI0,75-10GY 0.75 mm² (Phoenix Contact)
- A1-10 1.0 mm² (Phoenix Contact)
- A1,5-10 1.5 mm² (Phoenix Contact)